

IN THE SPECIFICATION

Please rewrite the paragraph beginning at page 4, line 16 as follows:

Given the determination of the ideal clock times, portions of the recorded data are organized as shown in Figure 1. As is shown in Figure 1, a theoretical single data stream 100 comprises a plurality of bit intervals ~~105~~ 105a 105b, 105c, Data value lines 110, 111, 112, 113 depict a possible state of a current bit interval ~~105~~ 105a based upon a state of a prior bit interval. For example, in bit interval 105a, if a value near the end thereof is at location 106, for bit interval 105b, the value can either stay the same, thus following value 110, or can fall, thus following value 111. Alternatively, if the value at bit interval 105a is at location 107, for bit interval 105b, the value can either stay the same, thus following value 112, or can rise, thus following value 113.

Please rewrite the paragraph bridging pages 4 and 5 as follows:

When a plurality of bit intervals are overlaid on top of each other, because there are only a small number of possible paths for each bit interval, all of the possible paths are represented. Thus, the bit interval data extracted from a stored data signal and overlaid in a persistence display produce a display such as that shown in Figure 2. Figure 2 shows an example of an eye diagram produced from a single recorded signal OC-48 at 2.48832 Gigabits/second recorded with a LeCroy® Wave Master 8500 oscilloscope at 20 GS/s, and processed as per the method and apparatus of U.S. Patent Application Serial No. 10/673,735 noted above.

Please rewrite the paragraph bridging pages 6 and 7 as follows:

There are many significant benefits associated with the analysis available in accordance with this invention. The invention provides a new method and apparatus for obtaining ISI contributions to both vertical and horizontal signal variations (jitter and noise). Unlike other

prior art methods that use a digital sampling-scope (in contrast to a single-shot or real-time digital oscilloscope) to measure noise free symbol responses by stimulating or controlling the data stream under test, this method does not require a specific controlled stimulus. Rather it sorts the information from any (either ~~PRBS~~ Pseudo-Random Binary Sequence (PRBS), constant pattern, truly random ... or even “live”) data streams. It has commercial value in that it determines ISI-based deterministic jitter and noise rapidly and free from statistical assumptions. This method provides a display which is insightful for understanding the nature of the variations in timing and vertical waveform characteristics which are otherwise hidden in noise. Another previously unexplored avenue is opened by such an analysis. By analyzing carefully the impulse response of the differential of two very special (100000... and 011111...) pattern-averages, one can learn about the time-domain and frequency-domain nature of the ISI physical phenomenon.